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EXAMINER	
BOEHLER, ANNE MARIE M	
ART UNIT	**PAPER NUMBER**
3611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/472,134	GIROUARD ET AL.	
	Examiner	Art Unit	
	Anne Marie M. Boehler	3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49,55,57,58,60,64-68,73,77-88,90 and 92* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49,55,57,58,60,64-68,73,77-88,90 and 92* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 40-43, 45-49, 77-82 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui (USPN 4,848,503) in view of 'The Seated Man (Homo Sedens) The seat ed work position Theory and Practice" article by A.C. Mandel, hereinafter referred to as "The Article".

With respect to claims 40 and 77, Yasui shows a snowmobile 11 with a frame assembly 12, a seat 14 carried by the frame designed to accommodate a single rider seated in a straddle position (col. 1, line 66-67), a power unit 31 suspended within frame assembly 12 and including an internal combustion engine 32 that is clearly in front of the seat (see figs. 1 and 2), a pair of front skis 16 supported on the forward section of frame assembly 12 and steered by steering shaft 17 and handle bar assembly 18 (steering device) journalled to the frame forward of the seat 14 in a convenient location for operation by the rider 15 (col. 2, lines 49-55), and a driving belt 21 (driving track) positioned beneath the seat 14 and extending rearwardly of it where it circles idler sprockets 22 and 23. The belt extends forwardly to circle driven shaft 29 (forward most drive axle) powered by the engine 32. Yasui shows a rider positioned on

the seat of the snowmobile such that his body assumes a particular position, i.e., with the rider straddling the vehicle, hand gripping the steering device such that elbows are substantially over the feet on the footrests/sideboards (footrests/sideboards are not noted by a reference #) and rider's back upright. Please note that applicant has defined the standard position and each of the angular relationships, not relative to a discreet point, but rather between various body parts of the rider. Although the drawings are not necessarily to scale, they do show relationships of components with respect to other components as well as horizontal and vertical positioning.

In view of this, it is clearly seen in figure 1 that the seat 14 provides a range of seat positions, including the seat position of the rider shown, which is behind and below the steering grip position. Footrests or sideboards (unnumbered) are generally horizontal over a substantial extent and form at least one foot position that is longitudinally between the steering position and the seat position and substantially lower than either the seat or steering position. With respect to the first angle claimed in claim 40, it would be difficult for a rider to position himself in a manner that did not satisfy the broad range if angles recited. The rider position shown in Figure 1 suggests a relatively large angle between a line through the steering position and the seat position and a line through the seat position and the foot position that is definitely within the rather broad range provided in the claim (63-152), a second (less than 90 degree) angle between a line passing through the footrest position and steering position and a line passing through the footrest position and the seat position that is also definitely within the broad range provided in the claim (16-64); and a third smaller (less than 42 degrees) angle between

a line passing through the footrest position and the steering position and a line passing through the steering position and the seat position. Thus, the only claimed limitations found in claim 40 and not deemed to be met by Yasui is the use of a "standard rider", i.e. having dimensions and weight of a 50% human male and the rider's torso tilted toward the steering device when in a "standard seating position".

As to the "standard rider", to ensure a large customer base, it would be desirable to have dimensions of a snowmobile be capable of accommodating a large range of intended users (i.e. be it a person of small stature or an average or "standard rider" adult, or a rather tall person) therefore, it would have been obvious to have constructed the snowmobile vehicle with a "standard rider" in mind so as to be comfortable for the majority of "standard" users and to best avail the product largest cross-section of customers. As for the "standard seating position" with the torso tilted toward the steering device, "The Article" broadly teaches that the "ideal" seating position, torso at 90 degrees to the thighs, is not a comfortable seating position for the majority of people. "The Article" further teaches that the seating position that should be considered the new "ideal" position is that in which the torso is tilted forward and the thighs are tilted such that the person's knees are below the hips. This positioning places the least amount of stress on the lower back and hips, thus is very comfortable. (Note particularly the paragraphs bridging pages 20 and 21 directed to Figure 4 a-d, as well as page 26 in the paragraph directed toward "riding". Yasui provides a seat and footrests spanning a significant length of the vehicle that allows the rider to position himself in a number of different seating positions, based upon his comfort level. Thus, as permitted by the

reference to Yasui, it is maintained that the seating position is highly dependent upon the rider's comfort level, physical conditioning, length of ride and even skill level of the operator. Such levels and conditioning all vary from one rider to another and are not constant. A rider will specifically choose how he sits with respect to the steering device and other snowmobile components based upon the variable parameters noted above. Thus it would have been obvious at the time of the invention to one of ordinary skill in the art to have had an operator select a "standard seating position" based upon his own personal preferences with respect to the steering device, seat, and footrests so that the rider is the most comfortable he can be throughout the duration of the entire ride, thus ensuring that he is best able to control the snowmobile.

With respect to claims 41-43 and 78-80 (the slightly more narrowed ranges, as well as the specific angles), although the drawings are not necessarily to scale, the positions shown in Figure 1 would suggest to one of ordinary skill in the art to configure a snowmobile so that the seat position, foot position, and steering position are relatively located with respect to one another for rider comfort since such associated angles will vary as the rider shifts around by moving his feet along the sideboards, moves forward and back along the seat, and changes where the steering handlebar is gripped. Thus, selection of such ranges, as well as specific angles, is dependent on the comfort and safety desired by the operator. It is not specifically evident if the more specific angular relationships --first angle 83 degrees, second angle 64 degrees, and third angle 33 degrees- in claim 43 between the lines connecting the steering position, seat position and foot position is met by Yasui. However, such angularity will depend upon quite a

few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device. Therefore, it is maintained that it would have been obvious to one of ordinary skill in the art at the time of the invention to have constructed the snowmobile of Yasui such that the positioning of the average rider would fulfill the requirements of respective angles are 83 degrees, 64 degrees, and 33 degrees, in order to provide optimum overall dimensions of the device for rider comfort and compactness. Furthermore, it is also maintained that even without a specific effort to dimension the snowmobile of Yasui in this manner, that it would have been obvious for a standard operator to have positioned himself at these specific angles with respect to the vehicle, dependent upon the skill and comfort level of the operator in order to enhance the operators feeling of comfort and vehicle control.

With respect to claims 45 and 82, everything noted structurally above, as well as the previous obviousness statements concerning the standard rider and standard seat position, also applies to the structural limitations present in this claim. Yasui further shows the first angle larger than the third angle. However, it does not show the first angle being 2.5 times the third angle. As previously pointed out, the positions shown in Figure 1 would suggest to one of ordinary skill in the art to configure a snowmobile so that the seat position, foot position, and

steering position are relatively located with respect to one another for rider comfort since such associated angles will vary as the rider shifts around by moving his feet along the sideboards, moves forward and back along the seat, and changes where the

steering handlebar is gripped. Thus, selection of such angles and angular relationships, is dependent on the comfort and safety desired by the operator. Such angularity and angularity relationship will depend upon quite a few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dimension the snowmobile so the angular relationship is the first angle being 2.5 times the third angle to provide optimum overall dimensions of the device for rider comfort and compactness.

With respect to claim 46, everything noted structurally above, as well as the previous obviousness statements concerning the standard rider and standard seat position, also applies to the structural limitations present in this claim. Also, Yasui shows an angle formed between a horizontal line and a line passing through the steering position and the seat position being well within the broad range provided in the claim (15 to 51).

With respect to claims 47-49, (the slightly narrowed ranges, as well as the specific angles), although the drawings are not necessarily to scale, the positions shown in Figure 1 would suggest to one of ordinary skill in the art to configure a snowmobile so that the seat position, foot position, and steering position are relatively located with respect to one another for rider comfort since such associated angles will vary as the rider shifts around by moving his feet along the sideboards, moves forward and back along the seat, and changes where the steering handlebar is gripped. Thus, selection of

such ranges, as well as specific angles, is dependent on the comfort and safety desired by the operator. It is not specifically evident if the more specific angular relationship -- the angle in question being 26 degrees-- in claim 49 between a horizontal line and a line passing through the steering position and the seat position is met by Yasui. However, such angularity will depend upon quite a few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dimension the snowmobile so the respective angle is 26 degrees to provide optimum overall dimensions of the device for rider comfort and compactness.

3. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bombardier (USPN 3,698,497).

Figure 2 shows a snowmobile that has a chassis 28 (frame having an inverted u-shape forming a tunnel) with footrests 29, seat 59 (inherently a straddle seat), motor/engine 26, and two skis on the frame (not numbered seen in figure 2). Shaft means 52 supports and rotates the track engaging sprockets (forward most drive track axle) and handlebars 72 connected with an unnumbered steering shaft (steering device) that connects via a linkage to the two skis (see figure 2). Engine 26 is disposed on chassis 28 (frame) via connection bracket 30 in front of seat 59 (see figure 2). Shaft means 52 (forward most drive axle) is clearly viewable in figures 2 and 3 as being located just in front of the forward extent of the footrests 29 and below the upper most portion of the tunnel 28. Figures 2 and 3 in combination clearly show that the

unnumbered steering shaft (steering device) connects with a linkage leading to the skis in front of shaft means 52 (forward most drive track axle). Endless belt 44 connects between driven pulley 46 mounted on shaft means 52 and drive pulley 38 mounted on the engine's crankshaft. Although drawings are not to scale they do show relationships of components with respect to other components as well as horizontal and vertical positioning. It is clearly seen in figures 2-4 that footrests 29 are horizontal, i.e., the angle between the horizontal and the footrest is 0, it furthermore would have been obvious to have constructed the footrest in this manner for the comfort and stability of the operator. With respect to the unnumbered steering shaft and an angle it forms with vertical, the reference is silent to such angularity. However, such angle appears to be less than 90 degrees, and in fact, less than half of that, i.e., less than 45 degrees. It is not specifically evident if the more specific angular range 25-40 degrees is met by Bombardier. Such specific angularity will be dependent upon what is most comfortable for riders as well as what provides the best steering capabilities. Thus, the selection of such a range, is dependent on the comfort and safety desired. Furthermore, such angularity will depend upon quite a few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dimension the snowmobile so the respective angle is in the range 25-40 degrees to provide optimum overall dimensions of the device for rider comfort and compactness.

4. Claim 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bombardier (USPN 3,698,497) in view of Marier et al. (USPN 5,660,245).

Figure 2 shows a snowmobile that has a chassis 28 (frame having an inverted u-shape forming a tunnel) with footrests 29, seat 59 (inherently a straddle seat), motor/engine 26, and two skis on the frame (not numbered seen in figure 2). Shaft means 52 supports and rotates the track engaging sprockets (forward most drive track axle) and handlebars 72 connected with an unnumbered steering shaft (steering device) that connects via a linkage to the two skis (see figure 2). Engine 26 is disposed on chassis 28 (frame) via connection bracket 30 in front of seat 59 (see figure 2). Shaft means 52 (forward most drive axle) is clearly viewable in figures 2 and 3 as being located just in front of the forward extent of the footrests 29 and below the upper most portion of the tunnel 28. Figures 2 and 3, in combination, clearly show that the unnumbered steering shaft (steering device) connects with a linkage leading to the skis in front of shaft means 52 (forward most drive track axle). Endless belt 44 connects between driven pulley 46 mounted on shaft means 52 and drive pulley 38 mounted on the engine's crankshaft. Bombardier does not expressly state where the center of gravity is, let alone an angle formed between a line passing through the forward most drive track axle and center of gravity and a horizontal line passing through the forward most drive track axle being less than 55 degrees, although it does show the majority of the vehicle weight, the engine and drive train, at the forward end of the vehicle and slightly rearward of the track axle 52. The track axle is vertically centered between the track 16 and the engine 26. The drawings of the Bombardier vehicle suggest the center

of gravity of the vehicle is vertically positioned approximately at the elevation of the track axle, because the engine is above the axle and the track is below it.

Marier et al. '245 teaches in column 2, lines 12-15, that an engine mounted low in the frame will result in a low center of gravity, thus making steering and handling easier. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to have positioned the engine in the frame relative to the drive track axle, such that an angle of less than 55 degrees is formed with respect to the center of gravity and drive track axle in order to provide handling and steering.

5. Claim 83 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui and "the Article" as applied to claims 77-82 above, and further in view of Trautwein (3,583,507).

Yasui lacks left and right toe-holds.

Trautwein shows, in Figure 7, a straddle-seat vehicle with sideboards 10 on left and right sides. The sideboard shown in Figure 7 has a toe-hold portion that extends up at the forward end of the toe-hold and curves back over the forward most portion of the footboard, to provide a releasable toe hold.

It would have been obvious to one of ordinary skill in the art to provide the Yasui snowmobile with toe-holds at the front and of the footboards, as taught by Trautwein, in order to provide the user better ability to grip the vehicle.

6. Claims 6-39, 44, and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui in view of applicant's admitted prior art (AAPA).

With respect to claims 6 and 16, Yasui shows a snowmobile 11 with a frame assembly 12, a seat 14 carried by the frame designed to accommodate a single rider seated in a straddle position (col. 1, line 66-67), a power unit 31 suspended within frame assembly 12 and including an internal combustion engine 32 that is clearly in front of the seat (see figs. 1 and 2), a pair of front skis 16 supported on the forward section of frame assembly 12 and steered by steering shaft 17 and handle bar assembly 18 (steering device) journalled to the frame forward of the seat 14 in a convenient location for operation by the rider 15 (col. 2, lines 49-55) , and a driving belt 21 (driving track) positioned beneath the seat 14 and extending rearwardly of it where it circles idler sprockets 22 and 23. The belt extends forwardly to circle driven shaft 29 (forward most drive axle) powered by the engine 32. Yasui shows a rider positioned on the seat of the snowmobile such that his body assumes a particular position, i.e., with the rider straddling the vehicle, hands gripping the steering device such that elbows are substantially over the feet on the footrets/sideboards (footrests/sideboards are not noted by a reference #) and rider's back upright. Yasui is silent regarding the use of a "standard rider" and the position of the centers of gravity of the snowmobile and rider.

As to the "standard rider", to ensure a large customer base, it would be desirable to have dimensions of a snowmobile be capable of accommodating a large range of intended users (i.e. be it a small child or a "standard ride/'adult, or a rather tall adult) therefore, it would have been obvious to have constructed the snowmobile vehicle with a "standard rider" in mind so as to be comfortable for the majority of "standard" users to avail the largest cross-section of customers.

As to the centers of gravity, according to AAPA, the center of gravity of prior art snowmobiles and his own is generally located at or near the drive sprocket (see applicant's disclosure page 8, lines 9-10). Applicant also indicates that the rider's center of gravity, in a standard position, is just forward of his stomach, set off from the center of the rider's torso (see applicant's disclosure page 8, lines 4-7). Applicant has also defined the various dimensions of the standard rider in Figures 19 and 20. Those dimensions are understood to be applicant admitted prior art. The angle between a line connecting the center of gravity of the rider and the center of gravity of the snowmobile relative to horizontal appears to be well within the ranges claimed. Claim 6 recites the extremely broad range of 35 degrees to 90 degrees from horizontal, which covers all angles within a 55 degree range. The center of gravity of the combined snowmobile and rider will also fall on the line connecting the two centers of gravity. Therefore, the line through the combined rider/snowmobile c.o.g. would have the same angle relative to horizontal and fall within the broad ranges claimed.

With respect to claims 7-9 and 17-19, (the slightly narrowed ranges, as well as the specific angles), although the drawings are not necessarily to scale, the positions shown in Figure 1 would suggest to one of ordinary skill in the art to configure a snowmobile so that the seat position, foot position, and steering position are relatively located with respect to one another for rider comfort since such associated angles will vary as the rider shifts around by moving his feet along the sideboards, moves forward and back along the seat, and changes where the steering handlebar is gripped. Thus, selection of such ranges, as well as specific angles, is dependent on the comfort and

safety desired by the operator. It is not specifically evident if the more specific angular relationship --the angle in question being 67 degrees-- in claim 9 is met by Yasui. However, such angularity will depend upon quite a few dimensions and component relationships that will be decided based upon the overall dimensions deemed appropriate for the desired optimum configuration such as for rider comfort and compactness of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dimension the snowmobile so the respective angle is 9 degrees to provide optimum overall dimensions of the device for rider safety, comfort and compactness.

With respect to claims 10-15, everything noted structurally above, as well as the previous obvious statements concerning the standard rider, also applies to the structural limitations present in this claim. Yasui clearly shows a rider positioned behind and at a higher elevation than the forward drive sprocket, but spaced forward of the rearward most end of the snowmobile. The distance between the center of gravity of the rider (just in front of the rider's stomach) and the center of gravity of the snowmobile (approximately at the drive sprocket) is approximately the distance between the rider's elbow to his fingertips. According to applicant's diagram of a standard rider, the distance from the rider's elbow to his fingertips is approximately 43.5 cm (forearm plus hand length: 25.4 + 18.1cm) or within the range of 41-50 cm (taken from the outer ranges described in Figure 19). Therefore, according to AAPA'S description of the standard rider, and centers of gravity of the rider and prior art snowmobile, for a standard rider in a standard position, it would have been obvious to make the distance between the

center of gravity of the rider and the forward drive axle of the Yasui snowmobile about the distance from the rider's elbow to his fingertips. This length is clearly within the ranges recited. As for the specific distance of 40 cm, a skilled artisan would then select a particular distance based upon the desired rider comfort and safety. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dimension the snowmobile so that the drive of the snowmobile is spaced from the center of gravity of the rider a specific distance of 40 cm in order to provide rider comfort and safety.

Regarding claim 44, the distance between the seat position and steering position shown is approximately the length of the rider's thigh. According to applicant's description of the standard rider, the thigh of a standard rider is 42.4 cm (or between 38.9 and 46 cm). It would have been obvious to one of ordinary skill in the art to dimension the Yasui snowmobile so that the distance between the seat position and steering position is within the broad range of 40-90cm, as recited in claim 44. It would also have been obvious to select particular ranges and specific dimensions, including a distance between the seat position and the steering position of approximately 42cm, as suggested by Yasui's Figure 1 and applicant's definition of the standard rider, in order to dimension the snowmobile for a standard rider and accommodate the rider's comfort and safety needs.

7. Claims 1-5, 84, 87, and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui (4,848,503) in view of AAPA and "The Complete Snowmobile Handbook", published 1974.

Yasui fails to teach the exact horizontal position of the center of gravity of the vehicle without the rider relative to the center of gravity of the vehicle with the rider, as recited in claims 1-5. However, as discussed above, it would have been obvious to one of ordinary skill in the art to position the center of gravity of the rider on the Yasui vehicle at approximately 43cm from the center of gravity of the vehicle. The Complete Snowmobile Handbook" describes snowmobile ranging in weight from 280 to 15381b. An average of these would be approximately 900. Taking the vehicle weight as 900lb., given that standard rider is 170lb, and the distance between the rider c.g. and the vehicle c.g. is approximately 43 cm, a simple calculation places the combined c.g. at X=(1/1070)170(43cm)=6.8cm from the c.g. of the vehicle. Therefore, it would have been obvious to one of ordinary skill in the art to construct a snowmobile with the features taught by Yasui at a weight of approximately 900lbs., as suggested by "The Complete Snowmobile Handbook", with a center of gravity of the vehicle at approximately 7cm from thecenter of gravity of the rider and vehicle, as determined above, in order to size the Yasui snowmobile for the standard rider.

Regarding claim 5, Yasui also shows the seat to have a significant length relative to the overall length of the vehicle. It would have been obvious to position the rider at any number of standard positions along the length of the vehicle, including at a position forward of that shown, which would result in center of gravity of the vehicle and rider being at only 5 cm from the center of gravity of the vehicle, in order to position the rider more forward which is a better position when in anticipation of rougher terrain.

8. Claims 55 and 57 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Marier (USPN 5,660,245).

Marier shows a snowmobile with straddle seat, footboards and a windshield 15 that extends above the steering position on a handlebar steering device 23. A line drawn through the seat position and the steering handle forms a line of approximately 10 degrees from a line through the seat position and the top of the windshield. While it is not assumed that the drawings are to scale, the relative positioning of the steering handle, the seat position and the windshield, shown in Figure 1 of Marier suggest dimensioning a snowmobile with those relative characteristics and, specifically, with the windshield extending above the elevation of the handlebar. Therefore, it would have been obvious to one of ordinary skill in the art to configure a snowmobile such that a line passing through the seat position and steering position and a line passing through the seat position and top edge of the windshield form an angle of approximately 10 degrees. It would also have been an obvious optimization to extend the windshield up, so that the angle reaches 18 degrees, in order to provide the rider with more protection from wind and snow.

9. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marier in view of Parks (USPN 5,251,948).

Marier shows all of the claimed features except that it is silent regarding positioning the rider's head in a laminar flow region of air moving over the windshield.

Parks teaches a snowmobile windshield which directs air flow over the rider's head to avoid turbulent air hitting the rider.

It would have been obvious to one of ordinary skill in the art to provide the Marier snowmobile with a windshield of the type taught by Parks, in order to direct the turbulent flow of air over the rider and maintain laminar flow past the rider's head.

10. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (USPN 3,734,219) in view of Hauser (USPN 3,578,095).

Christensen shows a vehicle with a seat d, steering member 10, two front skis 19, 20, drive track f, and front drive axle k in a tunnel formed by the snowmobile body. The position of center of gravity, c.g., of the snowmobile is shown in Figure 3 as being behind the steering member 10, with the forward drive axle positioned behind the steering member and forward of the center of gravity.

Christensen indicates that there is an engine that drive axle k, but fails to disclose its position.

Hauser shows a snowmobile with an engine 150 positioned in the front cowling, forward of the seat.

It would have been obvious to one of ordinary skill in the art to mount the Christensen engine in the front cowling, in front of the seat, as taught by Hauser, in order to effectively distribute weight within the vehicle.

11. Claims 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over "The Complete Snowmobile Handbook", pages 22, 50, and 324, and applicant's admitted prior art.

"The Complete Snowmobile Handbook", on Pages 21-22 describes and shows in Figure 2-1, a Bombardier Olympique snowmobile model. It shows a frame, straddle

seat, two skis, and a steering device. Engine options are discussed on page 22, but are not depicted in the drawings. The steering device is positioned forward of the seat by a spacing and the seat is depicted as extending for thirty inches (76 cm). The reference is silent regarding the position of the engine and a "standard position" of the rider. On page 50 of the "Handbook", Figure 3-4, a rider is shown in a typical sitting position. He is shown with legs straddling the vehicle, feet flat on the sideboards, hands on the handlebars and forearms and thighs parallel to each other, etc. This appears to correspond generally to applicant's defined standard position. The arms extend forward so that the seat position, as defined by applicant, appears to be approximately arms length from the steering position.

According to applicant's description of the standard rider, an arms length is approximately 72 cm (28.2 + 25.4 + 18.1= 71.7cm).

On page 324 of the handbook, Figure 12-1 shows a typical engine position, near the front drive axle and forward of the seat.

It would have been obvious to one of ordinary skill in the art to position the engine in front of the seat, as taught on page 324 of "The Complete Snowmobile Handbook" and as is typical, in order to locate the engine near the drive axle. It would also have been obvious to position the rider on the seat depicted in a "standard position" as described on page 50 and as defined by the applicant, at a location generally an arms length from the steering position, or approximately 70cm, in order to size the snowmobile for a typical rider. It would also have been obvious to position the rider on the seat in a standard position at 65 cm from the steering device, since the seat

is more than capable of accommodating a rider at that location and in order to optimize the position for the rider's comfort.

12. Claims 73 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA 2-273681 in view of Trautwein.

JA '681 shows a snowmobile with a frame, a straddle seat 7, an engine 5, a pair of skis 3, left and right sideboards 9, and a track 4. The sideboards are shown in the drawings as being angled at approximately 6 degrees down toward the front of the vehicle. JA '681 is silent regarding toe-holds.

Trautwein shows, in Figure 7, a straddle-seat vehicle with sideboards 10 on left and right sides. The sideboard shown in Figure 7 has a toe-hold portion that extends up at the forward end of the toe-hold and curves back over the forward most portion of the footboard, to provide a releasable toe hold.

It would have been obvious to one of ordinary skill in the art to provide the JA 681 snowmobile with toe-holds at the front and of the footboards, as taught by Trautwein, in order to provide the user better ability to grip the vehicle. It would also have been obvious to angle the footboards of JA '681 at an angle of approximately 6 degrees, as suggested by Figure 9 of the reference, in order to provide the footboard configuration shown.

13. Applicant's arguments filed July 5, 2005 have been fully considered but they are not persuasive.

Discussion of Declaration filed July 9, 2002

Applicant provided a declaration and numerous articles, filed July 9, 2002, as evidence in traverse of the rejection of various claims based on prior art to Yasui, Marier, and Trautwein. Applicant purported to have provided evidence of secondary considerations to establish that the invention was not obvious in view of the prior art. However, the evidence provided is not convincing.

First, applicant has not established an unmistakable connection between the attributes of the invention and the secondary considerations (see Gambo Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 USPN2d 1378, 1384 (Fed. Cir. 1997)). While some of the features discussed in the articles correspond to features described in applicant's disclosure and claims, many other characteristics of the Ski-Doo Rev are not part of applicant's present invention. For example, Exhibit B, page 30, refers to a new front suspension, easier access to mechanical parts, weight reduction, and a new chassis that are not discussed in applicant's present disclosure. The "Snowmobile" article, page 31, refers to new paneling and a "new engine", exhaust and suspension systems. The "SnowWeek" article, page 15, also talks about the "A-arm suspension", new frame configuration and "out-of this world styling", which are not features of applicant's present invention, while this article barely touches on the new seating position of the vehicle. Therefore, the evidence provided does not show a clear

nexus between the claimed subject matter and the advantages of the vehicle being discussed.

It is also unclear whether the vehicle described in the various articles is, in fact, the same vehicle as that described in the present application. Photos and drawings of the vehicle discussed in the articles bare little resemblance to the vehicle shown in the drawings of the present application. The styling and suspension and various other features of applicant's originally disclosed snowmobile appear to be the same as that of the prior art. Clearly, there are significant differences between the Ski-Doo Rev and the snowmobile disclosed in the present invention. Therefore, the relevance of articles discussing features of the Rev is questionable.

Applicant has failed to show commercial success. While applicant has provided numerous articles enthusiastically discussing the appearance and handling of the Ski-Doo Rev MX-Z, applicant has not established that the surprising characteristics of the Ski-Doo have resulted in dramatic sales. Even the declaration does not indicate any number of these machines have been sold or what their sales are relative to other models and other manufacturers. Therefore, although the articles appear to be enthusiastic about the Ski-Doo, applicant has provided no evidence of commercial success.

Applicant has not established a long-felt need or failure of others to solve a particular problem. The consensus of the articles appears to be that the previous models were good and the Ski-Doo ride and look are different. Rather than established a recognized long-felt need for a change, the evidence appears to indicate Ski-Doo

went in an unexpected direction. Also, since many features of the Ski-Doo vehicle contribute to the overall ride and appearance, many of which are not part of the present invention, the articles do not provide convincing evidence that the presently disclosed invention is the subject matter of the articles.

It is also noted, that the article from "Snowmobile Business", 1988, describing the Yamaha Snoscoot similarly touts the revolutionary design of that vehicle. Applicant has stated that the Snoscoot is the commercial embodiment of the Yasui patent. The Yamaha Snoscoot is described as "unlike any other snowmobile you've ever seen ...unlike any other in nearly every significant way." The riders of the Snoscoot sit upright with their feet in vertical alignment with their body. The styling of the Snoscooter also appears to be similar to the Rev models shown in various articles. Therefore, it appears that the Yasui model, which is the basis for rejection of many of applicant's claims, met with enthusiasm similar to that of the Rev.

In conclusion, applicant has failed to provide convincing evidence of secondary considerations. Applicant has not provided evidence of commercial success. Applicant has also failed to establish a clear nexus between any advantages of the commercial embodiment of the claimed and disclosed invention, particularly in that the commercial embodiment has numerous advantageous features that are not disclosed or claimed in the present application.

Paragraphs 45 and 46 of the declaration address the presence of a "tunnel" in the Yasui snowmobile. In paragraph 46, the declaration points out that Yasui does not teach a tunnel. Applicant also indicates that Yasui does not even disclose a

"snowmobile". This is despite the fact that the title of the Yasui invention relied upon in the rejection is "Small Snowmobile and Drive Arrangement Therefore" and the term "snowmobile" is used throughout the Yasui disclosure. Yasui teaches a framework and body structure that straddle the track, as does a "tunnel". Applicant's original disclosure and claims did not use the term "tunnel", but rather referred to a "frame 114". Since applicant failed to use the term "tunnel" anywhere his original disclosure or original claims, the applicant is not believed to be entitled to any particular definition of the term "tunnel". Therefore, the frame of Yasui is believed to meet the broad claim language in view of applicant's specification.

In paragraph 41, applicant asserts that Trautwein discloses no "toe-holds" whatsoever. The examiner disagrees. Figure 7 of Trautwein shows a snow vehicle having footboards 10 with a toe-hold (unnumbered) at its forward end that is turned up and angled backward so that a rider's foot may be removably inserted under the overhand to releasably secure the toe of the rider. Clearly, a forward foot stop is shown in Trautwein. Applicant has admitted as much. Applicant indicates a toe-hold disposed in a vertical plane with the rider's toes is not shown. First, applicant's original specification did not describe, or show in the drawings, a toe-hold in vertical alignment with the rider's toes. Second, the claim recitation of "toe-holds disposed respectively above the rider's toes in a vertical plane" has questionable definiteness since it may require the rider to place his toes under the toe-hold for the claim to be met (IPXL Holding, LLC v. Amazon.com, Inc. 222 F. Supp. 2d 513 (E.D.Va. 2004); 2005 U.S. App. LEXIS 25120, 20 and 21). Third, as indicated above, Trautwein shows footholds that

angle back over the footboard such that a rider can place his toes under the toe-holds to releasably secure them on the footboards. The declaration has not specifically addressed this structure in Trautwein.

On the chance that applicant means to assert that toe-holds were unknown on snowmobile footboards prior to his invention, an additional prior art reference to Stacy (USPN 3,692,130) is being cited. Stacy is not being used to reject the claims because the examiner maintains that toe-holds, as claimed, are taught by Trautwein. However, Stacy provides a more explicit teaching of toe-holds on snowmobile footboards. In col. 3, lines 59-65, running boards 41 are provided with foot brackets 33. Stacy states that these "may take the form of 'L' brackets, one on each side of the body 32, into which the rider may insert his toes". Clearly, Stacy teaches a snowmobile with toe-holds on foot boards, in vertical alignment with the rider's toes, allowing the rider to releasably secure himself to the snowmobile.

Response to arguments filed July 5, 2005

Regarding the rejection of claims 40-43, 45-49, 77-82, and 88 in view of Yasui and the "The Seated man..." article by Mandal, applicant argues the Mandal article is non-analogous art. The examiner disagrees.

Mandal is concerned with improving the comfort of individuals while sitting. The article mainly discusses the structure of the human body and how the internal human structure moves when assuming different sitting positions. It clearly points out that the best sitting position, whether for the purpose of study or sport (horseback riding) is with

the body leaning slightly forward to relieve the spinal shift that flattens the lumbar region and causes back strain. The forward lean allows the natural curvature of the lumbar region to remain and provides better sitting comfort. This teaching is universal, based on the structure of the spine, and is not particular to the classroom environment. This is particularly pointed out in the article's discussion of horseback riding, where the writer indicates the forward leaning seated position is ideal.

Applicant indicates that the discussion of sitting positions in Mandal for the purpose of study and horseback riding is unrelated to sitting on a snowmobile. The examiner disagrees. Again, the Mandal discussion addresses the nature of the human structure and universal elements of ergonomics. While it emphasizes the importance of placement with respect to sitting at a desk or table, because a large number of people spend considerable time there, the disclosure is not limited to that environment. The discussion of horseback riding is particularly relevant to a snowmobile sitting position. Both require the rider to straddle the seat, brace the feet and alter position depending on riding conditions. Therefore, the examiner maintains that one of ordinary skill in the art would have adapted the snowmobile of Yasui for a forwardly leaning seated human being, as taught by Mandal, in order to improve the comfort of the rider.

Applicant also argues that the combination of Yasui and Mandal would not meet the claimed invention because neither reference teaches positioning the rider's elbows over the rider's feet. Applicant indicates that Mandal shows that the elbows may or may not be over the feet and that Yasui lacks any disclosure of "the rider's elbows substantially over the rider's feet".

First, the examiner points out that the rider is not part of the claimed invention, nor are his body parts. Therefore, the prior art need not provide any disclosure of the rider in any particular position. Applicant's persistence in claiming the invention (the snowmobile) in terms of its dimensional relationship to the standard human rider in a standard riding position is taken to be broad and functional, if not indefinite.

Second, the term "over" or "substantially over" is not limited to structure that is in vertical alignment. According to the "The American Heritage Dictionary, Second College Edition", copyright 1982, "over" is defined as "at a position above or higher than". Figure 1 of Yasui clearly shows the elbows of a rider on the Yasui snowmobile at a higher elevation than both of his feet. A rider would have to be performing a spectacular stunt in order to ride with his feet above his elbows. The rider's elbows are above the feet in any rider position that would allow operation of the vehicle.

Furthermore, Figure 1 of Yasui (USPN 4,848,503) shows one foot of the rider forward of the elbows, but the other foot shows an alternative positioning where the foot is rearward and substantially in vertical alignment with the rider's elbows. Applicant is doubtful that Yasui show two alternate foot positions. To further disclose the footrest positions of Yasui, its disclosure incorporates by reference USPN 4,892,164 to Yasui, shick clearly shows and describes the two footrest positions. Figures 2 and 3 of '164 show forward upwardly sloped footrest portion with ridges 35 for a rider's feet (see col. 3, lines 25-33) and a rearward, substantially flat footrest portion 38 (col. 3, line 35). The Yasui '503 snowmobile shown includes the same rearward set of footrests that are

capable of accommodating a rider whose feet are in vertical alignment with his elbows, as shown in the Yasui '503 patent.

The Mandal article also shows, in Figure 10, two possible foot positions for a seated person in a favorable seated position. One foot is positioned below the body in substantial alignment with the elbows of the seated person. Therefore, Mandal also teaches an advantageous position of the seated person where the feet can be positioned below and in substantial alignment with the elbows.

Applicant flatly states that the examiner is mistaken in her determination that the broad ranges of angles claimed are clearly met by Yasui. However, applicant has not addressed what Yasui shows. Applicant indicates that the drawings may be relied upon for what they would reasonably teach one of ordinary skill in the art. However, applicant ignores the relative positioning of various elements shown in the Yasui drawings. For example, applicant claims an angle (alpha) of 63 to 152 degrees. The angle alpha (between the line connecting the seat position and handle position with the line connecting the seat position and footrest position of the rearward foot) in Yasui is approximately a right angle (a little over 90 degrees). The other two angles, beta and gamma, of the triangle connecting the seat position, footrest position, and steering position, of Yasui are substantially smaller. When the rider's foot is in the rearward footrest position shown in Figure 1 of Yasui, it is impossible for the angular relationships recited in claim 40 to not be met. If one were to measure the angles alpha, beta, and gamma (as defined by applicant) from the Yasui drawings, they would be approximately 88 degrees, 52 degrees, and 40 degrees, respectively. The angular relationships

shown in the drawings cannot be taken as an explicit teaching of the preferred embodiment because the drawings are not assumed to be to scale. However, the actual relationship shown can be taken as a suggestion of such special relationships. This suggestion cannot be ignored or dismissed by a statement that they have little value. The suggestion is there before us, and the examiner maintains that it would have been obvious to one of ordinary skill in the art to configure a snowmobile such that a standard rider would be positioned as shown in Figure 1 and such a positioning would fall within the ranges claimed.

Applicant challenges the determination that the angular relationship recited in claims 45, 78-80, and 92 would have obvious through optimization. The examiner maintains that the angular relationship claimed is one value which would have been obvious based on the teachings of Yasui and Mandel. Absent clear evidence of the criticality of the angular relationship, that determination will be maintained.

With respect to claim 46, applicant claims an angle phi (of a line between the steering position and the seat position relative to horizontal) falling within a range of 15 to 51 degrees. Again, applicant argues that the examiner's determination that the Yasui configuration is well within the broad range claimed absent a specific teaching separate and apart from a drawing has little value. The examiner disagrees. The drawings are part of the disclosure. Applicant has admitted that the drawings must be relied upon for what they would teach one of ordinary skill in the art. It is clear from the drawings that the angle phi of the line passing through the seat and steering positions must be within the broad range of 15 to 51 for the vehicle to brea any resemblance to what is disclosed

by Yasui. The angle shown in the Yasui drawings appears to be approximately 28 degrees. If the angle were smaller than 15 degrees, for example, the seat would have to be elevated to nearly the level of the handlebar, so that the rider would have to reach down to grasp the handlebars. If the angle were more than 51 degrees, the seat would have to be lower or the handlebar considerable higher or farther back. Even without relying on the particular 28 degree angle shown in the Yasui drawings, it is not feasible to construct the Yasui snowmobile in such a way that the angel phi is outside of the range of 15 to 51 degrees. Therefore, it would have been obvious to construct the Yasui snowmobile such that the handlebar and seat have the relative positioning specified.

With respect to claim 92, applicant argues that the shaft means 52 of Bombardier is disposed intermediate the ends of steering shaft and, therefore, is not rearward of it. However, the claims are not necessarily limited to the entire steering shaft being positioned forward of the drive shaft. A substantial portion of the steering shaft 72 is forward of the drive shaft 52 in Bombardier. If this were not an accurate interpretation, then applicant's recitation, in claim 92 of the steering shaft "being disposed over the engine" would also be inaccurate because, while a portion of applicant's disclosed steering shaft 72 extends over the engine, another portion extends down to the front skis, at a position below the engine. Clearly, not all of applicant's steering shaft is over the engine. Therefore, the rejection will be maintained.

Regarding claim 85, applicant argues that Bombardier and Marier fail to teach a line between the center of gravity and the forward track axle to be within 55 degrees

from horizontal. The examiner first must point out that, as claimed, the position for the positioning of the center of gravity relative to the track axle must be within a broad 110 degree range (55 degrees, plus or minus, from the horizontal). This is a broad range. The center of gravity would, essentially have to be right above or right below the track axle for this relationship to not fall within the range. In Bombardier, it appears the major weights, the engine and the tracks, are positioned on opposite sides, above and below, as well as behind the drive axle and, therefore, the center of gravity would tend to be behind the track axle, but not significantly above or below it. Marier provides the teaching to position the engine low to improve handling. Therefore, it would have been obvious to one of ordinary skill in the art to position the center of gravity behind the track axle and to lower the engine and center of gravity to somewhat below the drive axle and below the top of the tunnel, in order to improve stability.

Regarding claim 83, applicant again argues that Trautwein fails to show toe-holds. The examiner maintains that Trautwein shows, in Figure 7, a forward wall on the footboard 10 that curves and angles back to overlap the front end of the footboard so that a rider can insert his toe to releasably secure himself to the snowmobile (described in more detail above). Therefore, the claimed feature is believed to be taught.

Regarding claims 6-39, 44, and 90, applicant argues that the teaching of Yasui and Applicant's Admitted Prior Art (AAPA) are not combinable because Yasui describes a small snowmobile and AAPA is a large snowmobile. However, Applicant has not described the AAPA as large or small, but rather as "conventional". Also, the AAPA is substantially relied upon for its definition of the standard rider and that the position of

the center of gravity in a conventional snowmobile corresponds to the forward track drive axle. This appears to be because the engine and skis are positioned in front of the track axle and the track and rider are positioned behind the axle. This relative positioning of major vehicle components is substantially similar in both Yasui and AAPA. Therefore, applicant's assertion that teachings from AAPA cannot be used in combination with the Yasui vehicle is without merit.

Applicant also asserts that AAPA does not disclose the angle between the first center of gravity (without the rider) and the second center of gravity (with the rider). The examiner agrees that AAPA does not explicitly disclose that angle. AAPA is not relied upon for a teaching of that angle. AAPA is relied upon for its teaching with respect to where the center of gravity of a conventional snowmobile and a standard rider are located. AAPA clearly indicates that the center of gravity of a snowmobile is approximately at the front drive axle. This makes sense in that the major components of the vehicle (the engine and track) are spaced at the front and rear of the track axle and the track axle is near the longitudinal center of the vehicle. It could also be argued that the center of gravity is inherently positioned toward the center of the vehicle, approximately at the track axle, due to the engine and track placement and the AAPA teaching is not required. However, that issue has not been presented. It is maintained, however, that it would have been obvious, if not inherent, to position the center of gravity of the Yasui vehicle proximate the forward track axle. Applicant has not specifically disputed that element of the rejection.

The examiner stated in the latest Office Action that the first center of gravity (of the snowmobile alone), the second center of gravity (of the snowmobile and rider), and the center of gravity of the rider alone fall on the same line. The applicant has stated, on page 37, the last paragraph, that this conclusion is incorrect and irrelevant. The examiner disagrees. Example 9-7 on page 246 of the "Physics for Science and Engineering" text proves that the combined center of gravity of two masses lies along the line connecting the centers of gravity og the masses. This is also relevant because Yasui shows where the track axle is (corresponding to the second c.g.) and generally where the rider's center of gravity is (the rider is shown and his c.g. is just in front of his abdomen). The angle of the line between those points, as depicted in Figure 1, is approximately 60 degrees from horizontal. The angle of the line between the first c.g. and the second c.g. is the same, approximately 60 degrees (because the first c.g., the second c.g. and the rider's c.g. lie on the same line). Therefore, it is not clear how the angle of the line between the first c.g. and second c.g. could fall outside of the claimed range of 35 to 90 degrees for the snowmobile taught by Yasui. For the claimed range not to be met, the rider would either have to be positioned forward of the c.g. of the vehicle (for an angle greater than 90 degrees) or the c.g. of the snowmobile would have to be located at the top of the snowmobile body. Neither is possible for the structure taught by Yasui. Therefore, the rejection will be maintained.

Regarding claims 7-9, as best determined using the analysis discussed above, the angle between the first c.g. and the second c.g. would be approximately 60 degrees from horizontal. As discussed above, a number of factors go into the positioning of the

rider on the vehicle c.g. The examiner maintains that it would have been obvious to position the rider and/or optimize the snowmobile to provide optimal dimensions for rider safety and comfort. Absent a showing as to the criticality of the specific dimensions claimed, the rejection will be maintained.

Regarding claims 10-14, applicant correctly indicates that the examiner discussed distances between the center of gravity of the vehicle relative to the center of gravity of the rider. Claims 10-14 describe the distance between the forward track axle and the c.g. of the rider. This has been corrected. Also, the examiner had made it clear in the Office Action that the c.g. of the vehicle corresponds to the track axle position, so it would have been evident to the applicant that the distance discussed also corresponds to the distance between the track axle and the rider c.g. Therefore, the rejection is being maintained with a slight clarification of language in the rejection.

Regarding claim 16, applicant argues that there is no discussion of the angle of the line between the drive track axle and the rider's center of gravity. It is clear in the discussion of claims 6-9 that the location of drive track axle is believed to correspond to the location of the center of gravity of the snowmobile and that angle, as depicted in the Yasui drawings is approximately 60 degrees. It is also clear that specific angles and measurements are subject to optimization, based on the various factors discussed. Absent a showing of criticality, a particular angle or measurement selected that falls within a reasonable proximity to the prior art is not patentably distinct.

Regarding claims 1-5, 84, 87, and 88, applicant argues that applicant is not claiming a snowmobile that weighs 900 pounds. In fact applicant's sparse specification

has given no indication of how much applicant's snowmobile weighs, what its actual dimension are, or really how the snowmobile is designed so that the specific spatial relationships claimed are accomplished. However, every snowmobile inherently has some fixed weight. In order to determine how the addition of a standard load (standard rider of 170lb.) will affect the combined c.g. of the snowmobile and rider, the weight of the snowmobile must be determined in some way. For the purpose of this Office Action, an average weight, between 280 and 1538 lb. was assumed as an expedient. The examiner maintains that one of ordinary skill in the art would have followed a similar process in determining how to carry out the invention. Given an estimated, average weight for the cycle, which is believed to have been obvious to one of ordinary skill in the art, applicant's claims do not patentably distinguish over the prior art of record.

Regarding claims 55 and 57, applicant argues that the anglular relationships shown in the drawings of Marier are not a suggestion to construct a snowmobile having those positional relationships. The examiner disagrees. The drawings are part of the prior art disclosure. The drawings cannot be ignored. While they may not be an explicit teaching to construct the vehicle according to the exact design shown, they are a suggestion that it is obvious to do so.

Regarding claim 58, applicant argues that Marier and Parks fail to teach the rider's head being positioned within the laminar flow region when the rider is in the standard position. As discussed above, a claim that requires a rider's head to be in a particular position relative to the apparatus for the claimed combination to be met has questionable clarity and definiteness. Also, the determination of the transition between

laminar and turbulent flow is a very complicated analysis. It is well beyond the scope of applicant's disclosed invention or the specific teachings of the prior art. Parks, however, teaches a windshield that directs air over the rider's head such that that air flow does not interfere with the rider while operating the snowmobile. If the flow were turbulent in the region of the rider's head, then it would invariably interfere with the rider's operation of the vehicle. Therefore, it would have been obvious to provide a windshield of the type taught by Parks so that the flow of air over the rider's head is laminar, not turbulent, in order to improve rider comfort.

Regarding claim 60, applicant indicates that Christensen fails to show the shaft k forward of steering handle 10. The claim recites the axle to be forward of the center of gravity and rearward of the rearward-most portion of the steering device. A vertical line through drive axle k is just behind the rearward most portion of steering handle, every other element of the steering device is positioned in front of the drive axle k and the center of gravity of the snowmobile. Therefore, that claim limitation is met. Applicant argues that Christensen fails to disclose a tunnel. Applicant also failed to mention a "tunnel" anywhere in his original specification or claims. Christenson shows a body structure b that straddles and encloses sides of the track. This structure is believed to constitute a tunnel, as broadly recited. The drive axle is surrounded by track f which is contained by the tunnel and clearly is positioned within the tunnel.

Regarding claims 64-68, applicant argues that the Dempsey reference does not disclose the distance between the steering position and the seat position. Applicant also points out that it does not teach the length of the rider's arm. The examiner

maintains that it would have been obvious to one of ordinary skill in the art to dimension the Dempsey snowmobile to a standard rider. AAPA defines the standard rider and discloses that the standard rider's arm is approximately 72 cm in length. Dempsey shows that the distance between the steering position and the seat position is approximately an arm's length. Even without assuming the Dempsey drawings are to scale, it would have been obvious to dimension the Bombardier Olympique snowmobile disclosed by Dempsey so that the distance between the steering position and seat position is about an arm's length, or 72cm for a standard rider. Therefore, the claim language is believed to be met by the combination.

Regarding claims 73 and 86, applicant argues that the showing in Kitamura of footboards having an angle of approximately 6 degrees is entitled to little value. The drawings are part of the disclosure and cannot be ignored. Even though the drawings are not assumed to be to scale, they clearly show footboards that angle down toward the front. The angle appears to be approximately 6 degrees. Therefore, there is a suggestion in Kitamura to angle the footboards at a 6 degree angle. Therefore, the rejection is being maintained.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M Boehler whose telephone number is 703-308-0422. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 703-308-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/5/05

Anne Marie M Boehler
Primary Examiner
Art Unit 3611

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